Follow-up Research on Comparative Data for Water and Sewer Financing
Fiscal Modernization Study Commission
Kara A. Millonzi, UNC School of Government
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Below are a few tables and charts comparing water and sewer revenues and expenditures in North Carolina with those in five other southeastern states—Georgia, South Carolina, Tennessee, Virginia and West Virginia. The first table presents aggregate local revenue and expenditures for water and sewer infrastructure and operating expenses for fiscal 2001-2002. The second table details current water and sewer rates charged by a few selected cities in each of the six states. The charts depict state funding for water and sewer infrastructure from 2000-2003 for several states, including the six southeastern states.

# **Comparison of Water and Sewer Aggregate Local Revenue and Expenditures**

The following table details aggregate local government revenue and expenditures for water and sewer for six southeastern states during 2001-2002. The revenue figures include only moneys raised at the local government level. The expenditure figures include capital and operational costs. The data was compiled from the 2002 U.S. Census of Governments. Dollar amounts are in thousands.

	North Carolina	Georgia	South Carolina	Tennessee	Virginia	West Virginia
<b>Local Revenues</b>						
Water &	\$1,409,342	\$1,754,254	\$825,235	\$1,119,140	\$1,528,364	\$264,621
Sewer						
Special	\$13,889	\$20,584	\$26,238	\$17,105	\$72,521	\$10,160
Assessments*						
Total	\$1,423,231	\$1,774,838	\$851,473	\$1,136,245	\$1,600,885	\$274,781
<b>Expenditures</b>						
Water** &	\$1,837,762	\$3,583,550	\$958,951	\$1,287,851	\$1,718,661	\$339,864
Sewer						

## **Explanation of Categories:**

#### Revenue

- Sewer: Figures include local government revenue from charges for sewage collection and disposal and sewer connection fees. They do not include moneys raised from impact fees.
- *Water:* Figures include local government revenue from the operations of public water supply systems, such as sale of water to residential, industrial, and commercial customers, connection and "tap" fees, sprinkler fees, meter inspection fees, late payment penalties, and other operations revenue. The figures do not include water impact fees and other special assessments.
- Special Assessments: Figures include local government revenue from compulsory contributions and reimbursements from owners of property that benefit from specific public improvements; impact fees to fund extension of water and sewer infrastructure. \*The figures also include revenue from assessments on roads and other infrastructure facilities in new developments.

### **Expenditure**

- Sewer: Figures include local government expenditures on the provision, maintenance, and operation of sanitary and storm sewer systems and sewage disposal and treatment facilities—for example, construction and maintenance of sanitary sewer lines; sewer cleaning; lift or pump stations; sewage treatment plants; water pollution control plants; storm drains that are not connected with highway projects; systems for the collection and disposal of storm runoff; and any intergovernmental payments for such activities.
- Water: Figures include local government expenditures for the operation, maintenance and construction of public water supply systems, including production, acquisition, and distribution of water to the general public or to other public or private utilities, for residential, commercial or industrial use. \*\*Because of the way the data is reported, there are some capital costs for water infrastructure that are not reflected in these figures.

## **Comparison of Water and Sewer Utility Fees for Selected Cities**

The following table details monthly residential water and sewer utility fees for selected cities in the six southeastern states. It also includes some statistical data for purposes of comparison. The cities in each state were selected to represent a range of population and median income levels across the six states. It is important to note that in each state there are different legal structures for providing water and sewer services, making comparisons among and within the states difficult. Most entities charge a monthly fixed or minimum fee to all customers and then have a variable rate depending on usage. The variable rate may have multiple tiers—either increasing block (where the per unit rate increases with consumption level) or decreasing block (where the per unit rate decreases with consumption level). Consumption levels typically are measured in Ccf units or gallons. (One Ccf is defined as 100 cubic feet—equal to 748 gallons of water.) In jurisdictions with tiered rate structures, the ranges of rates per usage are indicated below. Each jurisdiction sets its block rates at different consumption levels, however, which are not reflected in the chart. The inside city rate is the rate charged to resident customers; the outside city rate is that charged to non-resident customers.

Note that this chart only reflects rates charged to single family, residential customers. Many jurisdictions have separate rates for commercial or industrial customers, irrigation customers and multi-unit dwellings. Most jurisdictions also charge additional impact or capacity fees and connection fees for new customers, as well as reconnection fees and various penalties for late payments. The data was compiled from the U.S. Census Bureau and from published water and sewer rates in the various cities.

	Population Estimate (2003)	Median Household Income (1999)	Land Area in Square Miles (2000)	Water Residential Inside City Monthly Rates (2006)	Water Residential Outside City Monthly Rates (2006)	Sewer Residential Inside City Monthly Rates (2006)	Sewer Residential Outside City Monthly Rates (2006)
North Carolina							
Charlotte	584,658	\$46,975	242	\$1.80 fixed + \$1.28-\$4.14 per usage		\$1.80 fixed + \$2.98 per usage (up to maximum of 18 Ccf)	
Greensboro	229,110	\$39,661	105	\$4.40 fixed + \$1.47-\$3.40 per usage	\$8.80 fixed + \$2.94-\$6.80 per usage	\$4.40 fixed + \$2.55 per usage	\$8.80 fixed + \$5.10 per usage
Gastonia	67,781	\$36,924	46	\$3.55 fixed + \$2.69-\$2.01 per usage	\$3.55 fixed + \$5.39-\$4.05 per usage	\$3.87 fixed + \$3.31 per usage	\$3.87 fixed + \$5.76 per usage

	Population Estimate (2003)	Median Household Income (1999)	Land Area in Square Miles (2000)	Water Residential Inside City Monthly Rates (2006)	Water Residential Outside City Monthly Rates (2006)	Sewer Residential Inside City Monthly Rates (2006)	Sewer Residential Outside City Monthly Rates (2006)
Jacksonville	67,386	\$32,544	44	\$8.48 fixed + \$.17- \$.22 per usage (above 2,000 gallons)	200% of city rates	\$20.64 fixed + \$.55-\$.65 per usage (above 2,000 gallons)	200% of city rates
Kannapolis	38,178	\$35,532	30	\$3.30 fixed + \$4.92 per usage	\$3.96 fixed + \$5.90 per usage	\$3.80 fixed + \$4.82 per usage	\$3.80 fixed + \$4.82 per usage
Georgia							
Atlanta	423,019	\$34,770	132	\$3.30 fixed + \$1.29-\$3.10 per usage + \$.15 per usage nat'l security surcharge	\$3.30 fixed + \$1.76 -\$3.75 per usage + \$.15 per usage nat'l security surcharge	\$3.30 fixed +\$4.90-\$7.89 per usage + \$.15 per usage nat'l security surcharge	\$3.30 fixed + \$4.90-\$7.89 per usage + \$.15 per usage nat'l security surcharge
Savannah	127,573	\$29,038	75	\$5.53 fixed + \$.25- \$.34 per usage	\$8.29 fixed + \$.37- \$.51 per usage	\$4.40 fixed + \$.76- \$.98 per usage	\$6.60 fixed + \$1.18-\$1.47 per usage
Marietta	61,282	\$40,645	22	\$9.92 fixed + \$2.36 per usage (over 2,000 gallons)		\$10.71 fixed + \$5.35 per usage (over 2,000 gallons)	
East Point	37,220	\$31,874	14	\$6.39 fixed + \$2.04-\$2.26 per usage	Charged 1.5 times the rate charged city residents	\$4.95 fixed + \$2.67 per 1000 gallons	
Gainesville	29,806	\$36,605	27	\$8.67 fixed + \$6.08-\$1.84 per usage	\$16.32 fixed + \$11.52-\$3.48 per usage	\$4.60 fixed + \$4.60 per usage (based on 85% of monthly water readings)	
South Carolina							
Columbia	117,357	\$31,141	125	\$4.70 fixed + \$1.48 per usage (above 3 Ccf)	\$\$9.42 fixed + \$2.68 per usage (above 3 Ccf)	\$4.16 fixed + \$2.20 per usage (above 3 Ccf)	\$4.16 fixed + \$3.16 per usage (above 3 Ccf)
Rock Hill	56,114	\$37,336	31	\$9.28 fixed +	\$19.01 fixed +	\$13.99 fixed +	\$28.01 fixed +

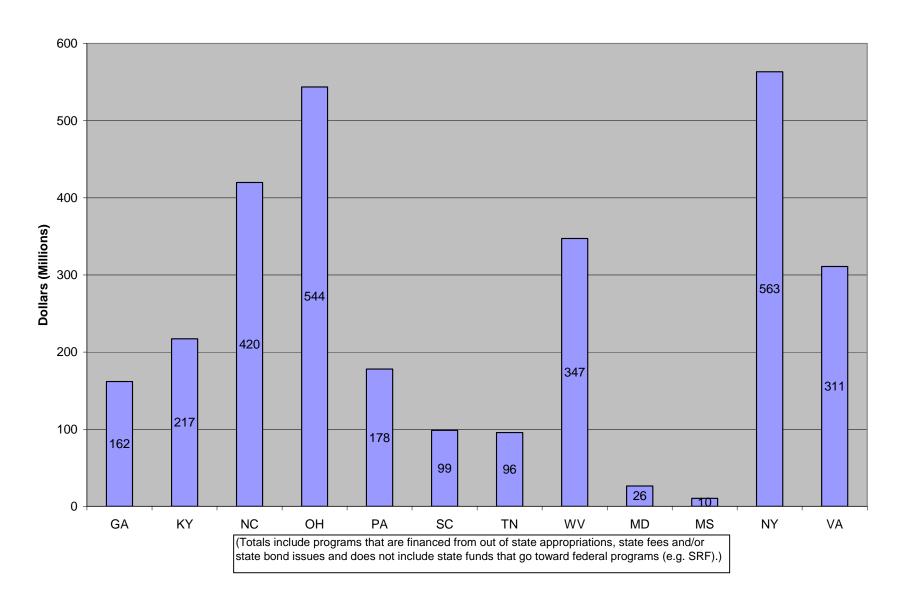
	Population Estimate (2003)	Median Household Income (1999)	Land Area in Square Miles (2000)	Water Residential Inside City Monthly Rates (2006)	Water Residential Outside City Monthly Rates (2006)	Sewer Residential Inside City Monthly Rates (2006)	Sewer Residential Outside City Monthly Rates (2006)
				\$.00123 per usage	\$.00271 per usage	\$.00278 per usage (\$48.79 maximum)	\$.00487 per usage (\$88.95 maximum)
Summerville	31,734	\$43,635	15	\$8.00 fixed + \$1.50 per usage (above 2,000 gallons)	\$13.00 fixed + \$2.20 per usage (above 2,000 gallons)	\$9.79 fixed + \$4.51 per usage (\$63.91 maximum)	(\$88.93 maximum)
Florence	30,267	\$35,388	18	\$10.27 fixed + \$1.43 per usage	\$13.65 fixed + \$2.15 per usage	\$16.82 fixed + \$1.77 per usage	\$23.14 fixed + \$2.66 per usage
Aiken	26,456	\$44,172	16	\$4.96 fixed + \$.76- \$1.37 per usage (rates also vary seasonably)	\$9.92 fixed + \$1.52-\$2.40 per usage (rates also vary seasonably)	\$7.35 fixed + \$1.48 per usage	\$14.70 fixed + \$2.96 per usage
Tennessee				2,	,		
Memphis	645,978	\$32,285	279	\$4.81 fixed + \$1.14 per usage	\$6.70 fixed + \$1.78 per usage		
Murfreesboro	78,074	\$39,705	39	\$7.83 fixed + \$2.61 per usage (above 3 Ccf)	Rates are 50% higher outside the city	\$7.83 fixed + \$.70 per usage (above 3 Ccf)	Rates are 50% higher outside the city
Bartlett	42,245	\$66,369	19	\$4.00 fixed + \$1.24-\$1.14 per usage (above 2,000 gallons)	\$6.00 fixed + \$1.86-\$1.71 per usage (above 2,000 gallons)	\$4.27 fixed + \$1.13 per usage (above 2,000 gallons)	\$6.27 fixed + \$1.23 per usage (above 2,000 gallons)
Smyrna	30,172	\$44,405	23	\$6.75 fixed + \$2.03-\$2.46 per usage (above 2,000 gallons)	\$8.86 fixed + \$3.05-\$3.70 per usage (above 2,000 gallons)	\$9.03 fixed + \$1.92 per usage (above 2,000 gallons)	\$13.48 fixed + \$2.76 per usage (above 2,000 gallons)
Oak Ridge	27,338	\$41,950	86	\$8.01 fixed + \$3.10-\$1.56 per usage (above 2,000 gallons)	,	\$11.50 fixed + \$4.13-\$5.55 per usage (above 2,000 gallons)	,
Virginia							
Virginia Beach	439,467	\$48,705	248	\$4.10 fixed + \$3.70 per usage		\$16.88 fixed	

	Population Estimate (2003)	Median Household Income (1999)	Land Area in Square Miles (2000)	Water Residential Inside City Monthly Rates (2006)	Water Residential Outside City Monthly Rates (2006)	Sewer Residential Inside City Monthly Rates (2006)	Sewer Residential Outside City Monthly Rates (2006)
Chesapeake	210,834	\$50,743	341	\$15.50 fixed + \$3.23 per usage (above 3 Ccf)	( , , , , )	\$5.95 fixed + \$.73 per usage (above 3 Ccf)	(
Portsmouth	99,617	\$33,742	33	\$5.00 fixed + \$3.38 per usage		\$2.30 fixed + \$2.65 per usage	
Harrisonburg	41,170	\$29,949	18	\$6.10 fixed + \$2.17-\$1.83 per usage (above 3,000 gallons)	\$11.69 fixed + \$4.16-\$3.48 per usage (above 3,000 gallons)	\$3.18 fixed + \$.90- \$1.18 per usage (above 3,000 gallons)	\$5.31 fixed + \$1.45-\$2.01 per usage (above 3,000 gallons)
Blacksburg	40,066	\$22,513	19	\$2.10 fixed + \$3.06 per usage	\$3.68 fixed + \$5.36 per usage	\$2.13 fixed + \$3.48 per usage	\$3.73 fixed + \$6.09 per usage
West Virginia							
Wheeling	30,096	\$27,388	14	\$4.94 fixed + \$2.30-\$1.18 per usage (above 1,000 gallons)		\$3.04-\$2.36 per usage (\$5.64 minimum)	
Parkersburg	32,100	\$26,990	12			\$10.84 fixed + \$4.30 per usage	
Morgantown	27,969	\$20,649	10	\$4.18 fixed + \$2.09-\$1.14 per usage		\$6.70 fixed + \$3.35-\$3.48 per usage	

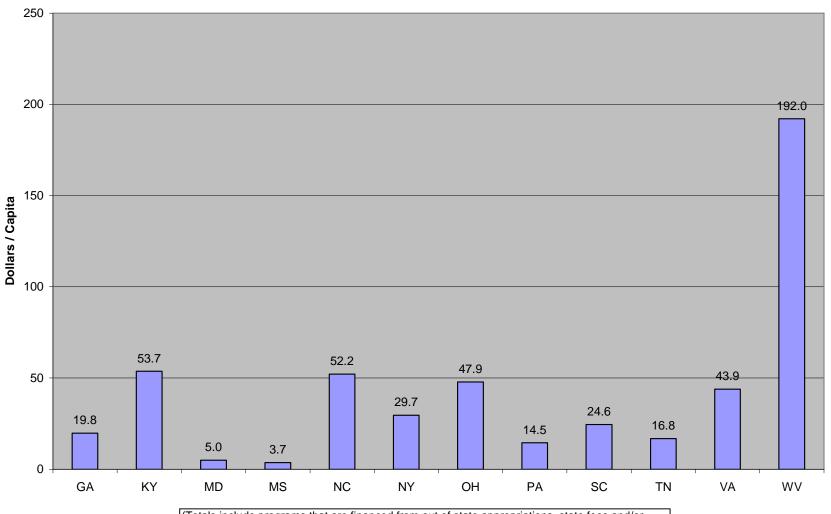
# **Comparison of State Funding for Water and Sewer Infrastructure**

The following charts provide a comparison of state funding for water and sewer infrastructure from 2000-2003 for several states, including the six southeastern states referenced above. Funding totals include state programs that are financed out of state appropriations, state fees and/or bond issues. They do not include state matching funds that go toward federal programs, such as state revolving funds. Population statistics are based on 2000 census data. The data was compiled by the N.C. Environmental Center.

# **State Program Funding for Water and Sewer Infrastructure (2000-2003)**



# Per Capita State Program Funding for Water and Sewer Infrastructure (2000-2003) (Population Data Source: US 2000 Census)



(Totals include programs that are financed from out of state appropriations, state fees and/or state bond issues and does not include state funds that go toward federal programs (e.g. SRF).)